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LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

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#### **Declarations under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)
- of inventorship (Rule 4.17(iv)) for US only

#### Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 24 June 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: LONG LASTING NATRIURETIC PEPTIDE DERIVATIVES

(57) Abstract: This invention relates to long lasting natriuretic peptide (NP) derivatives. The NP derivative has a NP peptide and a reactive entity coupled to the NP peptide. The reactive entity is able to covalently bond with a functionality on a blood component. In particular, this invention relates to NP derivatives having an extended *in vivo* half-life, and method for the treatment of cardio-vascular diseases and disorders such as acute decompensated congestive heart failure (CHF) and chronic CHF.



A. CLASSIFICATION OF SUBJECT MATTER IPC 7 C07K14/58 A61K38/22

According to International Patent Classification (IPC) or to both national classification and IPC

#### B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) IPC 7 C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, MEDLINE, EMBASE, CHEM ABS Data, EMBL

ategory °	Citation of document, with indication, where appropriate, of the	elevant passages	Relevant to claim No	
X	WO 00/69900 A (CONJUCHEM INC; HO DARREN L (CA); BRIDON DOMINIQUE THIB) 23 November 2000 (2000-11-page 3, line 19 - page 4, line 20-32 page 11, line 28 - page 12, line page 31, line 15 - page 33, line page 84, lines 3-6 page 159, lines 5-8 SEQ ID NO: 476	P (CA); -23) 20	1-26	
Special ca  A' docume consid  E' earlier of filing d  L' docume which citation  O' docume other r  P' docume later th	ont which may throw doubts on priority claim(s) or is cited to establish the publication date of another or other special reason (as specified) ant referring to an oral disclosure, use, exhibition or	T* later document published after the internation or priority date and not in conflict with the a cited to understand the principle or theory trinvention  *X* document of particular relevance; the claimed cannot be considered novel or cannot be considered novel or cannot be considered to involve an inventive step when the document of particular relevance; the claimed cannot be considered to involve an inventive document is combined with one or more other ments, such combination being obvious to a in the art.  *&* document member of the same patent family  Date of mailing of the international search regarders.  Authorized officer	onal filing date application but underlying the dinvention onsidered to not is taken alone dinvention e step when the ter such docuar person skilled	

Internation No
PCT/CA 03/01097

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	ation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	
T	LEGER ROGER ET AL: "Synthesis and in vitro analysis of atrial natriuretic peptide-albumin conjugates." BIOORGANIC & MEDICINAL CHEMISTRY LETTERS, vol. 13, no. 20, 20 October 2003 (2003-10-20), pages 3571-3575, XP001156881 ISSN: 0960-894X page 3572, left-hand column, paragraph 2 - page 3574, right-hand column, paragraph 1	1-26	



Box I	Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)
This Inte	rnational Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:
1. χ	Claims Nos.: 17, 21, 24-26 (part) because they relate to subject matter not required to be searched by this Authority, namely:
	Although claims 17, 21, 24-26 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2.	Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
з. 🗌	Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
Box II	Observations where unity of invention is lacking (Continuation of item 2 of first sheet)
This Inte	rnational Searching Authority found multiple inventions in this international application, as follows:
	see additional sheet
1.	As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2.	As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.	As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. X	No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
	1-4, 10-26 (part)
Remark	on Protest
	No protest accompanied the payment of additional search fees.

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.1

Although claims 17, 21, 24-26 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

Continuation of Box I.1

Claims Nos.: 17, 21, 24-26 (part)

Rule 39.1(iv) PCT - Method for treatment of the human or animal body by therapy

page 2 of 2

rmation on patent family members

Interior ial Application No PCT/CA 03/01097

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